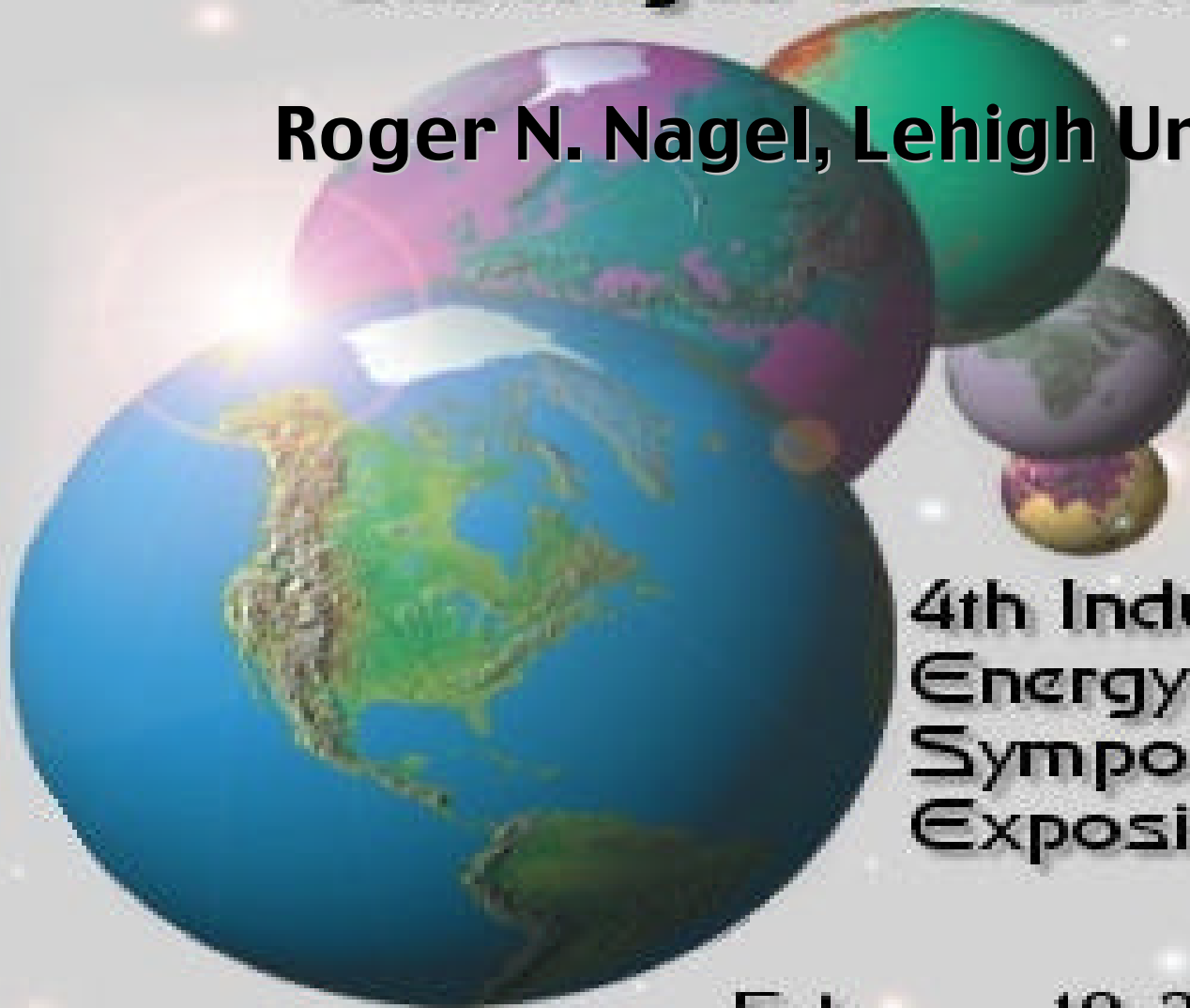


# GLOBAL COMPETITION: Challenges and Solutions

**Roger N. Nagel, Lehigh University**



**4th Industrial  
Energy Efficiency  
Symposium &  
Exposition**

**February 19-22, 2001**

**Washington Hilton and Towers, Washington, D.C.**

# B2B Exchanges

- Original thinking
  - Systemic sourcing - transaction efficiency
  - Spot sourcing - market efficiency
  - Horizontal - generalist
  - Vertical -specialist



# Problems for Some

- Perception of value
- Diminishing transaction costs
- Differentiation of exchange
- Need for relationship building



# Critical Lessons

- Pro-active value innovation: Altra
- Information utilities create niche markets:fob MSDSonline
- Active syndication of niche tools :eFodia
- Identify a unique e-commerce opportunity:3re.Com, Freemarkets
- Information excellence for a specific industry:Bulknet



What

How

**Systemic  
Sourcing**

**Spot  
Sourcing**

<b>Horizontal MRO Hubs</b> <ul style="list-style-type: none"><li>•Maintenance,</li><li>•Repair &amp; Operating</li></ul> <b>Seek Transaction Efficiency</b>	<b>Vertical Catalog Hubs</b> <ul style="list-style-type: none"><li>•One source (catalog)</li></ul> <b>Seek Transaction Efficiency thru Aggregating</b>
<b>Yield Managers</b> <ul style="list-style-type: none"><li>•Capacity, labor,</li><li>•utilities, advertising</li><li>•<b>Price &amp; Demand Volatility</b></li></ul>	<b>Exchanges</b> <ul style="list-style-type: none"><li>•Matching buyers &amp; sellers</li></ul> <b>Smooth out Demand Peaks</b>

# "E-hubs: The B2B Marketplaces"

- MRO hubs
  - Maintenance, repair & operating
- Yield managers
  - Capacity, labor, utilities, advertising, ...
- Exchanges,
  - Standardized industry based products
- Catalog hubs
  - Aggregated across sources

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**What**

**How**

**Systemic  
Sourcing**

**Spot  
Sourcing**

**MRO Hubs**

- Ariba
- W.W. Granger
- MRO.com
- BizBuyer.com

**Catalog Hubs**

- Chemdex
- SciQuest.com
- PlasticsNet.com

**Yield Managers**

- Employeease
- Adauction.com
- CapacityWeb.com

**Exchanges**

- E-Steel
- PaperExchange.com
- Altra Energy



- Formerly known as Altrade™, offers real-time online electronic trading for energy commodities.
  - Crude oil, natural gas liquids and power.
- Traders actively view and exchange bids and offers quickly and anonymously.
- Accessible 24x7.





# Critical Lesson (1)

- Passive is not enough
- Markets seek pro-active value innovation



# Altra Market Place

- Altra is currently transitioning customers to new technology that will ultimately integrate trading across all the energy commodities traded on our system, the Altra® market place.
- This technology utilizes a new Altrade desktop which is accessed through a standard web browser and builds upon our existing business logic programs, taking advantage of years of system development and deployment.

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# Altra Pro-active Value Innovation

- Extensive market price and volume discovery.
- Enhanced information about supply and availability.
- Reduced administration costs.
- Reduced transaction **risk** due to supply and payment guarantees.
- The market place also offers security supervision, contract consolidation, immediate online verification confirmed by fax and more.

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# Most Innovative Business Model

**Announced in September 2000**

- **Fob**, a buyer-centric procurement platform.
- Streamlines costly and labor-intensive activities when purchasing raw materials, such as chemicals, paper and plastic.
- Fob was selected because of:
  - Its singular focus on raw materials
  - Distinctive business model and
  - Noteworthy success in addressing the direct material needs of the fragmented chemical industry.

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# November 2000

- fob<sup>SM</sup> announced it has **suspended indefinitely** the development of its ProSource<sup>SM</sup> technology – a web-enabled procurement platform for the purchasing of industrial raw materials, such as chemicals, paper and plastics.
- **In order to focus on** MSDSonline which develops solutions for the electronic management of health and safety information, including material safety data sheets (MSDS).

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# Fob Safety Data Management

- The market potential for environmental, health and safety data management has far exceeded our expectations.
- Currently, MSDSonline offers a variety of software and services and operates the internet's most comprehensive search engine for MSDS documents.



# Fob Safety Data Management

- MSDS documents for example, are needed in every business that uses chemicals, solvents, paints, adhesives and other industrial products.
- Containing more than 300,000 MSDSs, indexed from more than 1,700 manufacturers, our powerful search engine provides the most comprehensive MSDS database available on the internet.
- To date, the MSDSonline web site has more than 50,000 registered users and is growing at a rate of more than 1,200 new users each week.

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## Critical Lesson (2)

- Information utilities can create profitable niche B2B markets
- The combination of a unique database and a powerful search engine provides value innovation





## Critical Lesson (3)

- Active syndication of niche tools can add significant value.
- Choose partners you can trust and rely on.



# eFodia: The New eChannel for Old Friends

[About Us](#)[Alliance Partners](#)[Buyers' Preview](#)[Customer Tools](#)[Reference](#)

Welcome To eFodia.

[Buy Products](#)[Home](#)[\[ Log In \]](#)

## The online alliance of trusted chemical and industrial suppliers



### What's New

[Chemidex and eFodia join forces to help formulators in their product development effort](#)

[MSDSonline Selected as MSDS Solution Provider for eFodia](#)

eFodia is the single, online link between you and a growing list of trusted chemical and industrial products suppliers. eFodia provides you with all of the benefits of online purchasing, while our alliance partners provide top-notch technical service and logistics support. It's "Win-Win" e-procurement.

### One-stop shopping from multiple suppliers

Our catalog-based site lets you browse, search, and buy from multiple companies. It's like a huge online supermarket for chemical and industrial products. But this supermarket is continually moving out the walls in all directions to handle more and more products.

# Best Integrated Business Solution

- The award went to **3re.Com**, a company that offers the online buyer a wide variety of product lines from leading manufacturers which can be uniquely configured to meet individual system or total office requirements.

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# Critical Lesson (4)

- Create new e-services which offer unique value
  - Turn a problem into an opportunity
    - Reverse logistics: 3RE.com
      - **Virtually New<sup>TM</sup>**
      - **oem2order**

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3RE.com



### Company Info:

#### Address:

3RE.com  
6269 E. Shelby Drive  
Memphis, TN 38141  
USA

#### Phone:

800.723.5640

#### Web Site:

<http://www.3RE.com>

Offerings	Online Catalog	Auction	RFQ	Exchange	Fee
Industry: Computers, Office Supplies and Equipment					
Computers & Equip, Refurbished	●	○	○	○	●
Computers and Office Equipment, Parts, New	○	○	○	○	○
Office Supplies	○	○	○	○	○
Software	●	○	○	○	●

### Overview:

Offers business and individual customers open-box returns electronics equipment that has been inspected and recommissioned. Offerings include PCs, printers, network equipment, handheld devices, faxes, cellular phones etc., and custom configuration is also available. Has a Returns Processing, Repair/Re-Manufacturing, and Internet Re-Marketing solution for electronic products.



# 3RE.COM

- 3re.com's effective integration of technical, logistics quality and customer service components in an e-commerce enabled business
- **Virtually New™** electronics equipment - open box and factory returns that are available just days from when they left the distribution shelf.

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## 3re.Com, Oem2order

- Our oem2order program allows you the flexibility to choose each component for your system across multiple top tier manufacturers' product lines.
- We will then assemble, configure, integrate peripherals and even load software to your specifications.
- When bundled with our unique delivery and installation services, oem2order fulfills all your technology needs at a tremendous price, from one to hundreds of systems.

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## Critical Lesson (5)

- Focus on excellence in an information fueled major enterprise need for a specific industry
  - Supply chain management in bulk chemicals







**Chemical Market News**  
Bulknet Rated in the Top  
5 Global Exchanges !

AMR Research Lists  
Bulknet as one of the top  
5 strongest independent  
trading exchanges.



**BulkSafe**  
Internet  
Solution for  
Mobile  
Chemical  
Incidents



**Bulknet # 1**  
**"Highest User Satisfaction"**

**B<sub>2</sub>B**

Bulknet utilizes Internet Technology to enable chemical manufacturers and distributors to manage their bulk distribution supply chain processes to achieve timely, efficient, and cost effective results. Shippers use a secure, neutral marketplace to find appropriately qualified suppliers, with whom they can build relationships, choosing from a wide variety of candidates in various transportation modes.

# Bulknet

- **Company reports that 53 large tank truck carriers representing 45% of bulk shipment revenues are registered.**
- **Provides online load matching based on carrier-configured lanes of traffic, performance ratings, types of load and shipper preferences.**
- **Real time tracking information.**
- **Direct links to WorldWideTesting for independent sampling and lab testing of chemicals.**

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# Bulknet

- Shipper posts RFQ on specific shipment. Posting can be transferred automatically using gateway technology.
- Carrier profiles include U.S. Department of transportation safety report, on-time record, regulatory authorizations and licenses and insurance information.
- A shopping mall provides access to vendors who sell industry-related equipment, and purchases can be accomplished on-site.
- Online truck wash locator.

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# Critical Lessons

- Passive is not enough - markets seek pro-active value innovation: Altra
- Information utilities can create profitable niche B2B markets:fob MSDSonline
- Active syndication of niche tools can add significant value:eFodia
- Unique e-commerce opportunity: 3RE.Com
- Focus on information excellence in a service for a specific industry:Bulknet

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# Bonus Critical Lesson

- Clear organization of information that is easy to use and search is an important success factor.



# Using Information Systems Well

- Strapping new technology to old business IS NOT THE SOLUTION



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# VerticalZOOM™

- Providing information and services that build trust, satisfaction, quality and efficiency in the global B2B marketplace.
- The B2B directory saves time for busy purchasing professionals by only including internet suppliers that meet stringent criteria.



# VerticalZOOM™

- Providing multiple ways to efficiently search for vendors, including supply chain maps, industry offering charts, key word search and company-specific search.
- Buyers can depend on company profile information because it is carefully analyzed and unbiased.

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# VerticalZOOM™

Verticals	Horizontals	Services
<a href="#"><u>Aerospace &amp; Defense</u></a>	<a href="#"><u>Computers, Office Supplies &amp; Equipment</u></a>	<a href="#"><u>Accommodation &amp; Foodservice</u></a>
<a href="#"><u>Agriculture</u></a>	<a href="#"><u>Consumer Goods</u></a>	<a href="#"><u>Admin/Human Resources</u></a>
<a href="#"><u>Apparel &amp; Furnishings</u></a>	<a href="#"><u>Environmental &amp; Safety</u></a>	<a href="#"><u>Collaboration/Project Mgmnt</u></a>
<a href="#"><u>Chemicals &amp; Sciences</u></a>	<a href="#"><u>General B2B Marketplaces</u></a>	<a href="#"><u>Education &amp; Training</u></a>
<a href="#"><u>Construction</u></a>	<a href="#"><u>Government</u></a>	<a href="#"><u>Financial &amp; Insurance</u></a>
<a href="#"><u>Electronics</u></a>	<a href="#"><u>Industrial Supplies &amp; Equip</u></a>	<a href="#"><u>Hosting, ASP</u></a>
<a href="#"><u>Energy &amp; Utilities</u></a>	<a href="#"><u>Shipping &amp; Warehousing</u></a>	<a href="#"><u>Legal, Intellectual Property &amp; Consulting</u></a>
<a href="#"><u>Food &amp; Beverage</u></a>	<a href="#"><u>Telecommunications</u></a>	<a href="#"><u>Marketing &amp; Advertising</u></a>
<a href="#"><u>Health &amp; Medicine</u></a>		<a href="#"><u>Sales Solutions</u></a>
<a href="#"><u>Metals</u></a>		<a href="#"><u>Testing Services</u></a>
<a href="#"><u>Motor Vehicle, Rail &amp; Marine</u></a>		<a href="#"><u>Travel</u></a>
<a href="#"><u>Paper &amp; Printing</u></a>		



# VerticalZOOM™ Industry Map

Verticals

Horizontals

Services

## Chemicals and Sciences Industry Map

> [Compare Offerings](#)

See Also:

[Energy and Utilities](#)  
[Environmental and Safety](#)  
[Industrial Supplies and Equipment](#)

See Also:

[Agriculture](#)  
[Apparel & Furnishings](#)  
[Construction](#)  
[Health and Medicine](#)

Basic Chemicals

Intermediates

Formulated/Spec

Users

[Chem.com](#)  
[CheMatch.com](#)  
[Chemconnect](#)  
[Chemical Online](#)  
[Chempoint](#)  
[ChemUnity](#)  
[cheop](#)  
[e-Chemicals](#)  
[fob](#)  
[i2i chemicals](#)

[Alfa Aesar](#)  
[BioBid.com](#)  
[Chemconnect](#)  
[Chemfinet](#)  
[Chemical Online](#)  
[Chempoint](#)  
[cheop](#)  
[Drug Discovery Online](#)  
[e-Chemicals](#)  
[Eastman](#)  
[FisherSci.com](#)  
[fob](#)  
[i2i chemicals](#)  
[MethodsFinder](#)  
[Plasticsandchemicals.com](#)  
[Sigma-Aldrich Corporation](#)

[Adhesives and Sealants](#)  
[Bioresearch Online](#)  
[ChemACX](#)  
[Commerx PlasticsNet.Com](#)  
[Eastman](#)  
[GE Polymerland](#)  
[LabX](#)  
[National Tool and Mfg. Co.](#)  
[Paint and Coatings Online](#)  
[Pharmaceutical Online](#)  
[Plasticsplatform](#)  
[Polymersite](#)  
[Polysort](#)  
[SciQuest](#)  
[Sigma-Aldrich Corporation](#)

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# Compare Offerings

Verticals

Horizontals

Services

## Chemicals and Sciences Compare Offerings

> [Industry Map](#)

	Offerings			
	Chemicals	Equipment	Rubber, Plastics, Fibers	Services
<a href="#">Adhesives and Sealants</a>	✓	✓		
<a href="#">Adhesivesmart</a>	✓			
<a href="#">Alfa Aesar</a>	✓			
<a href="#">BioBid.com</a>		✓		
<a href="#">Bioresearch Online</a>	✓	✓		
<a href="#">Chem.com</a>	✓	✓		
<a href="#">ChemACX</a>	✓			
<a href="#">CheMatch.com</a>	✓		✓	
<a href="#">Chemconnect</a>	✓		✓	
<a href="#">ChemDeals.com</a>	✓			
<a href="#">Chemfinet</a>	✓			
<a href="#">Chemical Online</a>	✓	✓		
<a href="#">Chempoint</a>	✓			
<a href="#">ChemUnity</a>	✓			
<a href="#">cheop</a>	✓			
<a href="#">Commerx PlasticsNet.Com</a>		✓	✓	
<a href="#">Drug Discovery Online</a>	✓	✓		
<a href="#">e-Chemicals</a>	✓			
<a href="#">Eastman</a>	✓		✓	

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## VerticalZOOM Profile

Capability Key: ☒ Advanced ☐ Basic ☐ None

**CheMatch.com**



### Company Info:

#### Address:

CheMatch.com  
2900 N. Loop West  
Suite 1120  
Houston, TX 77092  
USA

#### Phone:

888.525.1000

#### Fax:

713.681.0906

#### Web Site:

<http://www.chematch.com>

Offerings	Online Catalog	Auction	RFQ	Exchange	Fee
Industry: Chemicals and Sciences					
Chemicals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rubber, Plastics, Fibers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Overview:

CheMatch.com is a global, anonymous, online trading exchange for bulk commodity chemicals, plastics, fuel products and related options and futures contracts (cobranded with Globex2). \$83M in transactions in 2Q, 2000. Pre-select trading criteria, including participant-specific credit terms. Average transaction value over \$500,000. 425 member companies.

### Ownership/Investors:

#### Ticker Symbol:

**Investors:** Battery Ventures  
Bayer  
CSC  
DeWitt  
DuPont  
GE Plastics  
Millenium  
Muehlstein  
Reed  
Sprout  
Townsend Tarnell

# Best Specialty e-Marketplace

- AUTOVIA facilitates the procurement and distribution of automotive and truck replacement parts by connecting parts wholesalers and repair shops in local markets over the internet.
- They provide:
  - Search engine and procurement systems.
  - One invoice for multiple suppliers, incorporates negotiated pricing.
  - Ability to compare pricing, availability and delivery times from local and will-ship suppliers.

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## Best Specialty e-Marketplace [gettyone.com](http://gettyone.com)

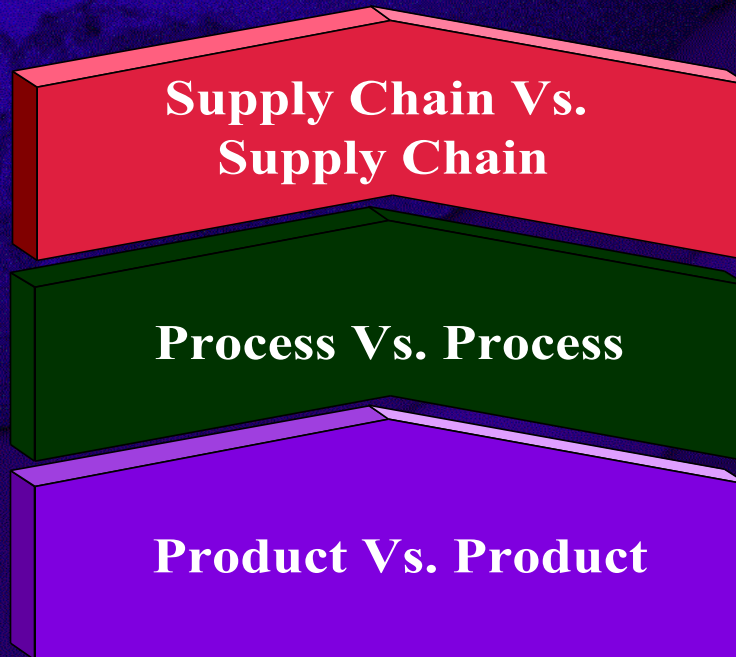
- Hub site for professionals in the graphic design, advertising, prepress, publishing and web design industries, allowing search, purchase and download from multiple brand collection of 200,000 royalty-free and licensed digital visual images.
- Their continued innovation and the value and convenience they provide to their customers in their special business are the reasons they were selected for best specialty e-Marketplace.





# Suppliers Are Organizing

**New forms of competition**



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**Good Luck, Stay in Touch and  
Thank You!**

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